

**Exemption No. 8199**

**UNITED STATES OF AMERICA  
DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION  
RENTON, WASHINGTON 98055-4056**

In the matter of the petition of

**Gulfstream Aerospace Corporation**

for an exemption from § 25.813(e), of  
Title 14, Code of Federal Regulations

**Regulatory Docket No. FAA-2003-16281**

**GRANT OF EXEMPTION**

By letter dated October 6, 2003, Mr. Thomas A. Knott, Senior Structural Certification Engineer, Gulfstream Aerospace Corporation, W6365 Discovery Drive, Appleton, WI 54914-9190, petitioned for an exemption from the requirements of § 25.813(e) of Title 14, Code of Federal Regulations (14 CFR). This exemption, if granted, would permit the installation of interior doors between passenger compartments on the Dassault Aviation airplane models Mystere Falcon 900 and Falcon 900EX.

**The petitioner requests relief from the following regulation:**

Section 25.813(e) prohibits the installation of doors between passenger compartments.

**The petitioner supports its request with the following information:**

“Permanent relief is sought for all Dassault Aviation Mystere-Falcon 900 and Falcon 900EX aircraft modified by Gulfstream Aerospace Corporation. This petition is due to a customer request for such a modification, and for the opportunity to offer this modification to other aircraft operators. Gulfstream wishes to be competitive with other modification providers who currently have an exemption.

“The cabin width of the Mystere-Falcon 900 and Falcon 900EX is approximately seven feet, therefore a side corridor is impractical. The feasible solution is laterally translating ‘pocket’ doors.

#### **14 CFR 11.81(d) Public Interest**

“Within Exemption No. 7590 granted to Dassault Falcon Jet Corporation for the Mystere-Falcon 900 and Falcon 900EX model aircraft, the FAA stated:

While the FAA is not aware of any specific incidents of economic harm as a result of different standards being applied to different use private airplanes, the FAA recognizes that significant upgrading of the occupant safety standards in recent years has made this a distinct possibility. Further, as more airplanes are used in executive operations, differences in certification bases will become more significant in terms of the burden of compliance. This issue is generally not a factor for commercial operation, because the operating rules are typically upgraded along with the type design standards, making the requirements effectively the same for all manufacturers. For privately-operated airplanes, however, this is not the case. Thus while a grant of exemption is clearly in the interest of the segment of the public for which it is requested, the FAA agrees that the public at large has the potential to benefit by granting increased flexibility to the manufacture and modification of the Dassault Falcon Jet airplane models Mystere Falcon 900 and Falcon 900EX.

“The above analysis recognizes the potential business opportunities of modifications. Also, it is obvious that one major reason for privately owned aircraft is the desire for privacy and security, and providing private compartments within an aircraft furthers the satisfaction of that desire. The use of business aircraft as a ‘flying office’ is well established and the ability to conduct private meetings improves this capability. If sick or medically compromised passengers are carried, private compartments can provide the surroundings most suitable for their care.

“Another benefit is an incentive for purchasers of aircraft to look at newer models, the common perception being that older aircraft are ‘less safe’ due to age-related issues. Though it is difficult to quantify, the net effect of compliance to newer type design standards in other areas is a mitigating factor.

“14 CFR 11.81(e) The reasons why granting the exemption would not adversely affect safety, or how the exemption would provide a level of safety at least equal to that provided by the rule from which you seek the exemption:

“While a grant of exemption as requested by this petition could not be said to provide the same level of safety that would be afforded where there is strict compliance with the regulations, the resultant level of safety would be consistent with other private airplanes. In addition, the level of safety that would result from this exemption is specifically requested and desired by that segment of the public, namely, the owners that will fly on these airplanes.

“It is the intent of this petition, whether or not operations are ‘scheduled,’ that this exemption will not permit fares to be collected in exchange for transportation. It is also the intent of this petition that the airplane will not be used to transport the general public (common carriage) even if fares are not collected. This exemption, if granted, should not restrict one party from collecting fees from another party, as long as the airplane is operated for private use. That is, the airplane’s owner may lease the airplane to another party, who in turn operates it as a private, not-for-hire airplane. Gulfstream envisions that this could be transmitted in the form of an Airplane Flight Manual Supplement that would be readily available to the flight crew.

“Though door mechanisms are highly reliable, like all mechanical devices they are subject to failure. The door jamming in the closed position is a serious safety concern. Therefore, Gulfstream proposes to demonstrate that the door(s) be frangible, that is, a 5<sup>th</sup> percentile female can open the door(s) by using physical force. This is an easily achievable goal considering that typical doors also contain breakaway features for compliance to decompression requirements (as stated in 14 CFR 25.365). In a related note, the resulting passageway after deployment of the frangible element will be demonstrated to allow a 95<sup>th</sup> percentile male to pass through.

“In this type of installation, placarding is customarily installed on a fixed portion of the partition, stating that the door(s) must be latched open for taxi, take-off, and landing. Flight deck annunciation is also proposed to advise the crew of improper cabin door position. Amber lights will be used, consistent with earlier petitions for exemption to this regulation. Gulfstream envisions that the annunciators will be tied to landing gear logic, such that the amber legends are illuminated when the landing gear is extended and the door is not secured open. This is to ensure compliance during the safety-critical phases of taxi, take-off, and landing. Gulfstream will also entertain suggestions for connection to the cabin ‘fasten seat belt/no smoking’ illuminated signs.

“With regards to reliability, these exemptions typically require that the door(s) have dual means to retain it in the open position, each of which must be capable of reacting the inertia loads specified in 14 CFR 25.561 to account for fuselage distortion after an emergency landing. Gulfstream will show compliance accordingly.

“Because of aircraft geometry, laterally translating doors are proposed. These are commonly referred to as ‘pocket doors.’ This is in full agreement with prior FAA policy on mid-cabin doors. Hinged doors are not desired and no attempt is made to open that issue.

“Earlier exemptions required that when doors are installed in a specified egress path, each passenger must be informed that the airplane does not comply with the occupant safety requirements mandated for the airplane type in general. This notification was to be required only the first time that a person was a passenger on the airplane. In Exemption number 8123, the FAA found that this limitation was not necessary, and I agree. There was more to be lost in the confusion about ‘what’s wrong with this airplane’ since the

design and operational limitations mean that the presence of the door is imperceptible to the passengers. Also, there have been industry-wide differences on how to implement this limitation, which is not a good situation. If required, Gulfstream would include such a limitation, envisioned in the form of an Airplane Flight Manual Supplement instructing the crew to include this notification in the pre-flight briefing. Even so, the briefing would have limited value since the crews of corporate aircraft are personally familiar with their passengers, and the passengers are familiar with the cabin.

“Previous exemptions have required an additional limitation when an interior door is installed aft of the mid-cabin exit so that persons seated aft of the door can enter the compartment forward of it, even if the door is latched from the forward side. This petition also recognizes that a cabin door must not prevent the crew from gaining access to the aft section of the cabin. This will allow the crew to render assistance to passengers who may have become incapacitated in the aft section of the cabin or to investigate and extinguish fires in the aft compartments. Gulfstream proposes that the door(s) be required to be unlocked or unlatched from either side without the use of tools. This is similar to existing requirements for lavatory doors and doors to Class B baggage compartments. As is customary, the partitions will have bulkhead signs indicating the presence of exits beyond the partition (as applicable to the floor plan), though these signs will be approved by other means and are not the subject of this petition.

“Therefore, Gulfstream proposes the following limitations:

“1. The airplane is not operated for hire or offered for common carriage. This provision does not preclude the operator from receiving remuneration to the extent consistent with 14 CFR Part 125 and 14 CFR Part 91, subpart F, as applicable.

“2. Each door between passenger compartments must be frangible.

“3. Each door between passenger compartments must have a means to signal to the flightcrew when the door is closed. Appropriate procedures/limitations must be established to ensure that takeoff and landing is prohibited when any such door is not in the proper takeoff and landing configuration.

“4. Each door between passenger compartments must have dual means to retain it in the open position, each of which must be capable of reacting the inertial loads specified in 14 CFR 25.561.

“5. When doors are installed in transverse partitions, they must translate laterally to open and close.

“6. Each door between passenger compartments (regardless of where it is located in relation to the emergency exits) must allow persons on either side of the door to unlock or unlatch the door without the use of tools.

**“14 CFR 11.81(g) Additional Information:**

“Exemptions to this rule have been granted before in the following instances:

| <u>“Number</u> | <u>Issued</u> | <u>Docket</u>  | <u>Petitioner</u>    | <u>Aircraft</u>   |
|----------------|---------------|----------------|----------------------|-------------------|
| 6820A          | 2/17/1999     | 29253          | Boeing               | 737-700 IGW (BBJ) |
| 7107           | 1/25/2000     | 29800          | Associated Air       | 757               |
| 7259           | 6/29/2000     | 29819          | Bombardier           | BD-700-1A10       |
| 7455           | 3/7/2001      | FAA-2000-8165  | Garrett (Jet Center) | BD-700-1A10       |
| 7573           | 7/20/2001     | FAA-2001-9346  | BFGoodrich           | BD-700-1A10       |
| 7590           | 8/10/2001     | FAA-2001-9619  | Dassault Falcon Jet  | Falcon 900/900EX  |
| 7688           | 11/27/2001    | FAA-2001-10870 | Garrett              | Falcon 900/900EX  |
| 7891           | 9/18/2002     | FAA-2002-12350 | Bombardier Tucson    | BD-700-1A10       |
| 7946           | 1/9/2003      | FAA-2002-12904 | Gulfstream           | GV-SP             |
| 7966           | 1/29/2003     | FAA-2002-12344 | JRG Design           | 747SP             |
| 8123           | 9/3/2003      | FAA-2003-15585 | Midcoast             | Falcon 900/900EX  |

“For those petitions where there was a public comment period, no adverse comments were received.

“Note that some of the aircraft listed above are substantially larger and have more complicated floor plans than the Mystere-Falcon 900 and Falcon 900EX. The FAA argument quoted previously is general in nature, applicable to all private use airplanes.

“It is also an issue of fundamental fairness that several of our direct competitors have received an exemption, though we should not receive an exemption solely ‘because everyone else has one.’ This petition should be evaluated on its own merits.

“The subject of this petition has also been addressed in a proposed SFAR (Special Federal Aviation Regulation) organized by The General Aviation Manufacturers Association (GAMA) Business Aircraft Interiors Ad Hoc Committee (reference letter WHS 03-14 dated May 6, 2003, from GAMA to the FAA). While this effort is obviously in the early stages, it does represent an effort by the FAA and industry to streamline regulatory processes. Hopefully this may be the last exemption requested for this rule.

“The proposed SFAR was initiated out of recognition that most 14 CFR Part 25 type design standards were developed due to airliner issues. The 14 CFR Part 25 rules do not make any distinction between the commercial transport category used in airline operations and the aircraft specifically used for private operations. Note that the Mystere-Falcon 900 and Falcon 900EX are limited to 19 passengers while airliners may have hundreds of passengers. The most significant difference is that in corporate aircraft, the exits are only steps away even with partitions installed.

### **“14CFR11.87 Good Cause**

“(a) This petition would not set a precedent.

“(b) It is indeed identical (by intent) to previously granted exemptions as noted above.

“(c) A delay would adversely affect us. The customer will be disappointed that they cannot have a cabin feature that is installed on their other aircraft (though certified to earlier certification bases), and available from other modifiers. Gulfstream may also suffer financially.

“(d) This petition was filed in a timely manner, more than the 120 days suggested in 14 CFR 11.63(d). We need it by the end of February 2004.”

The FAA has determined that good cause exists for waiving the requirement for Federal Register publication and comment because the exemption, if granted, would not set a precedent and any delay in acting on this petition would be detrimental to Gulfstream Aerospace Corporation.

### **The FAA’s analysis/summary is as follows:**

The FAA has reviewed the applicant’s petition for exemption and the proposed exemption limitations that have been submitted. We concur with the applicant’s petition and the proposed exemption limitations.

In consideration of the foregoing, I find that a grant of exemption is in the public interest and will not adversely affect the level of safety provided by the regulations. Therefore, pursuant to the authority contained in 49 U.S.C. 40113 and 44701, delegated to me by the Administrator, the petition of Gulfstream Aerospace Corporation, for an exemption from the requirements of 14 CFR 25.813(e), to allow installation of interior doors between passenger compartments on the Dassault Aviation airplane models Mystere Falcon 900 and Falcon 900EX, is granted, with the following provisions:

1. The airplane is not operated for hire or offered for common carriage. This provision does not preclude the operator from receiving remuneration to the extent consistent with 14 CFR part 125 and 14 CFR part 91, subpart F, as applicable.

2. Each door between passenger compartments must be frangible.

3. Each door between passenger compartments must have a means to signal to the flightcrew when the door is closed. Appropriate procedures/limitations must be established to ensure that takeoff and landing is prohibited when such compartments are occupied and the door is closed.

4. Each door between passenger compartments must have dual means to retain it in the open position, each of which must be capable of reacting the inertia loads specified in 14 CFR 25.561.

5. When doors are installed in transverse partitions, they must translate laterally to open and close.

6. Each door between passenger compartments (regardless of where it is located in relation to the emergency exits) must allow persons on either side of the door to unlock or unlatch the door without the use of tools.

Issued in Renton, Washington, on December 19, 2003.

/s/ Ali Bahrami

Ali Bahrami

Acting Manager

Transport Airplane Directorate

Aircraft Certification Service